

REMARKS

An Office Action was mailed on September 21, 2004. Claims 1 – 11 are pending in the present application.

REJECTION UNDER 35 U.S.C. §§ 102, 103

Claims 1 – 5, 8 and 9 are rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,550,805 to Takatori et al. in view of U.S. Patent No. 6,256,292 to Ellis et al. Claim 5 is rejected under 35 U.S.C. § 102(e) as being anticipated by Ellis, and alternatively by U.S. Publication 2002/0009091 to Taniguchi. Claim 6 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Takatori in view of U.S. Patent No. 5,479,608 to Richardson. Claim 11 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Takatori in view of U.S. Patent No. 6,735,171 to Takeguchi. Claim 10 is rejected under 35 U.S.C. § 102(e) as being anticipated by Takatori. Claim 7 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Ellis in view of Richardson.

Applicants respectfully traverse these rejections.

Takatori discloses a mechanism for ring switching performed when an SF failure is detected in any node of a 2-fiber BLSR ring network (see, e.g., column 6, lines 20 – 60 of Taketori). In this respect, Taketori is similar to the GR 1230 standard disclosed by Applicants (for example, at page 1, line 16 of Applicants' specification). In particular, as disclosed at column 4, lines 30 – 47, column 6, lines 15 – 60, Table 1, and FIG. 8 of Takatori,, a switching request and priority are described by using an APS of the BLSR as indicated in the GR 1230 standard.

Ellis discloses a method for performing BLSR switching and line overhead (LOH), as is also described by the GR 1230 standard (see, e.g., column 4, lines 40 – 67 and column 11, lines 1 – 62 of Ellis). As further disclosed at column 10, lines 32 – 40 and 55 – 65 of Ellis, when SF failures in a working channel and a protection channel are respectively detected in two adjacent nodes in the case of ULSR switching, one direction employs a full pass-through state and the other direction employs a K-byte pass through state. However, the method of Ellis is only effective when the switching is performed in one direction. In other words, according to the ULSR scheme, an erroneous connection would occur under BLSR, because it would be impossible to correctly recognize the current receiving states of the intermediate nodes.

Taniguchi discloses a BLSR incorporating a modified squelch method (see, e.g., abstract of Taniguchi). As disclosed at page 2, paragraph [0051], intermediate nodes enter a full pass-through state when ring switching due to SF-R has occurred.

Richardson discloses a group facility protection system for a digital telecommunications system (see, e.g., abstract of Richardson). Richardson discloses ring switching due to SF-R (see, e.g., column 0, lines 1 – 13), consistent with the GR 1230 standard.

Applicants' claimed invention provides a method for providing a correct switching by using an APS code which is unable to distinguish LP-S from SF-P, when LP-S or SF-P (a failure that only occurs in the fibers of the protection channels) is set in the case of 4FBLSR. Unlike Applicants invention as claimed in independent claims 1, 2 and 5 – 11, none of the cited references teach or suggest means for relieving failures occurring at opposing adjacent nodes when LP- S and SF-P are set as the same APS byte.

Although Takeguchi discloses use of an unused bit region, Takeguchi none-the-less fails to teach or suggest how this region may be used to discriminate between the LP-S and SF-P.

In sharp contrast to the cited references, according to Applicants' claimed invention, EXER-R is transmitted when an SF or SD failure is detected in both the working channel and the protection channel, under the state where SF-P and SP-S are received, and ring switching due to SF-R or SD-R is performed. Each of the cited references effectively teach away from Applicants' claimed approach as, consistent with the GR 1230 standard, each of the cited references defines each of the EXER-R, SF-R and SD-R as using the same APS byte.

The cited references also fail to teach how intermediate nodes operate when one of LP-S or SF-P is received from one direction, and a ring switch request (e.g., SF-R) is received from the other direction. With reference to the GR 1230 standard, it is only disclosed that a full pass-through state is set when SF-R switching is performed, and a K-byte pass-through state is set when an LP-S command is executed.

In sharp contrast, according to Applicants' claimed invention, a K-byte pass-through state is set for the intermediate node when both a ring switch request and either a LP-S or SF-P occur simultaneously. As a result, the path which is set in the protection channel of the intermediate node can be continuously used without disconnecting the path for squelch processing.

Accordingly, Applicants respectfully submit that the cited references, alone and in combination, fail to anticipate or make obvious Applicants' claimed invention as claimed in independent claims 1, 2 and 5 – 11, and that independent claims 1, 2 and 5 – 11 are

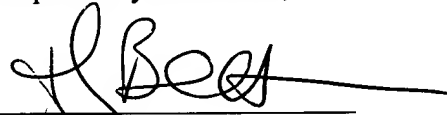
therefore allowable. As claims 3 and 4 depend from allowable independent claims 1 and 2, Applicants further submit that dependent claims 3 and 4 are allowable for at least this reason.

CONCLUSION

An earnest effort has been made to be fully responsive to the Examiner's objections. In view of the above amendments and remarks, it is believed that 1 - 11, which include independent claims 1, 2 and 5 - 11, and the claims that depend therefrom, stand in condition for allowance. Passage of this case to allowance is earnestly solicited. However, if for any reason the Examiner should consider this application not to be in condition for allowance, he is respectfully requested to telephone the undersigned attorney at the number listed below prior to issuing a further Action.

Any fee due with this paper may be charged on Deposit Account 50-1290.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'T. Bean', with a long horizontal line extending to the right.

Thomas L. Bean
Reg. No. 44,528

CUSTOMER NUMBER 026304

PHONE: (212) 940-8800/FAX: (212) 940-8776
Docket No.: 100794-11652 (FUJA 18.480)